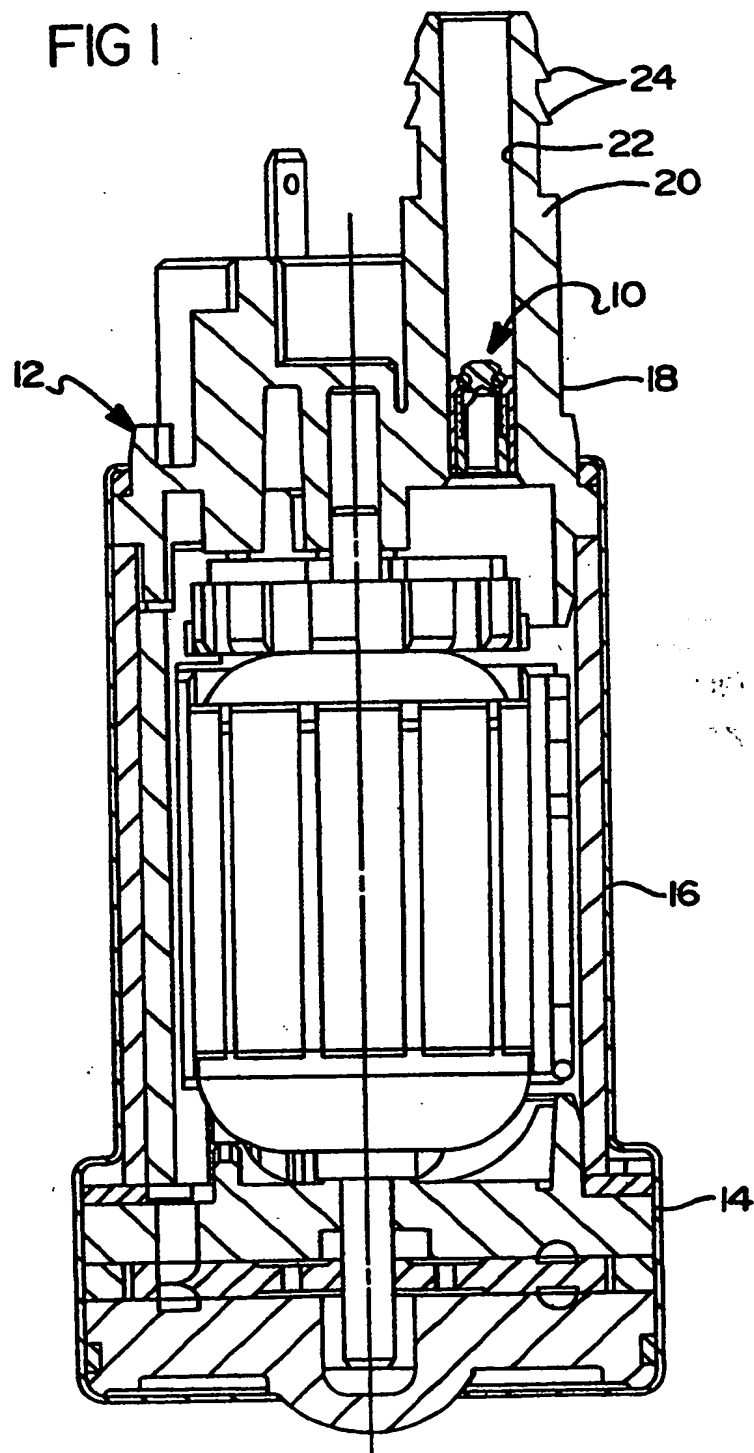
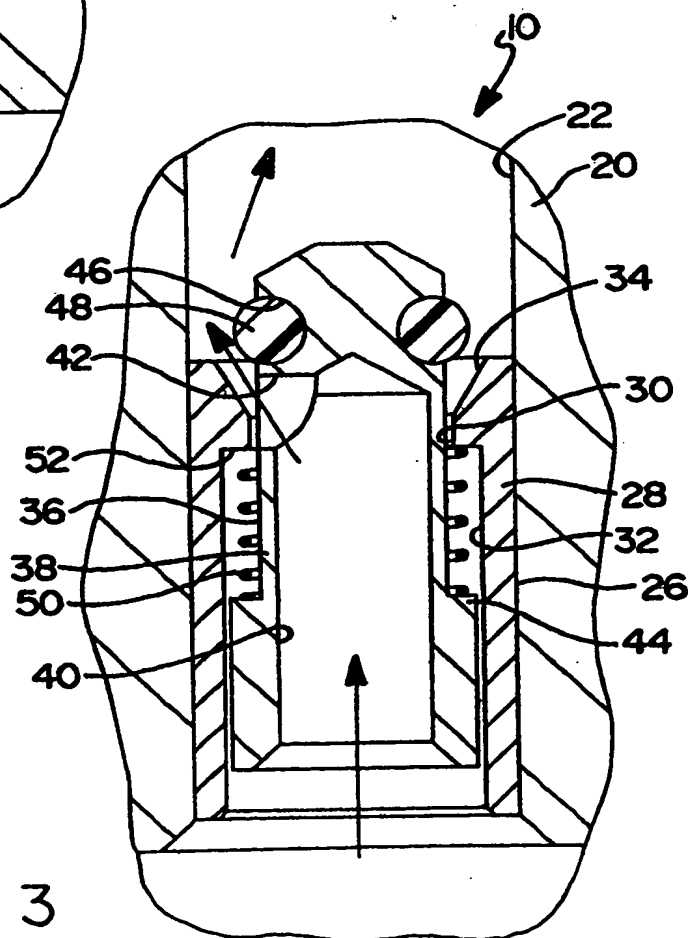




FIG 1





RESTRICTION OF TYPICAL VALVE DESIGN

- ♦- TYPICAL FLOW THROUGH DESIGN
- TYPICAL FLOW THROUGH DESIGN WITH LARGE OUTLET PORTS FOR LOW RESTRICTION
- △- TYPICAL FLOW AROUND PINTEL
- MONO-PORT FLOW THROUGH DESIGN

PRODUCES VIOLENT OSCILLATIONS AND NOISE

PRONE TO OSCILLATIONS AND NOISE

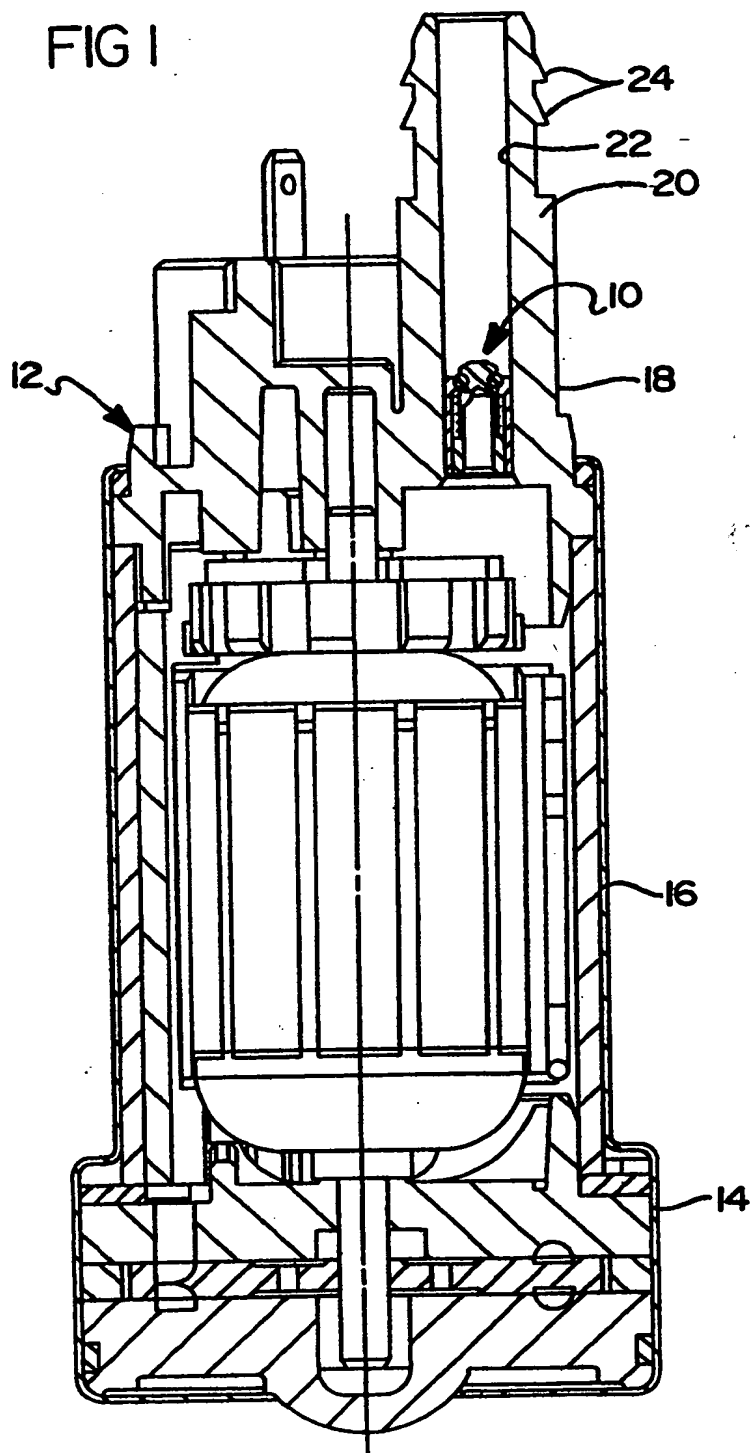
PRONE TO OSCILLATIONS AND NOISE

PRESSURE (kPa)

FLOW(q/s)



FIG 1



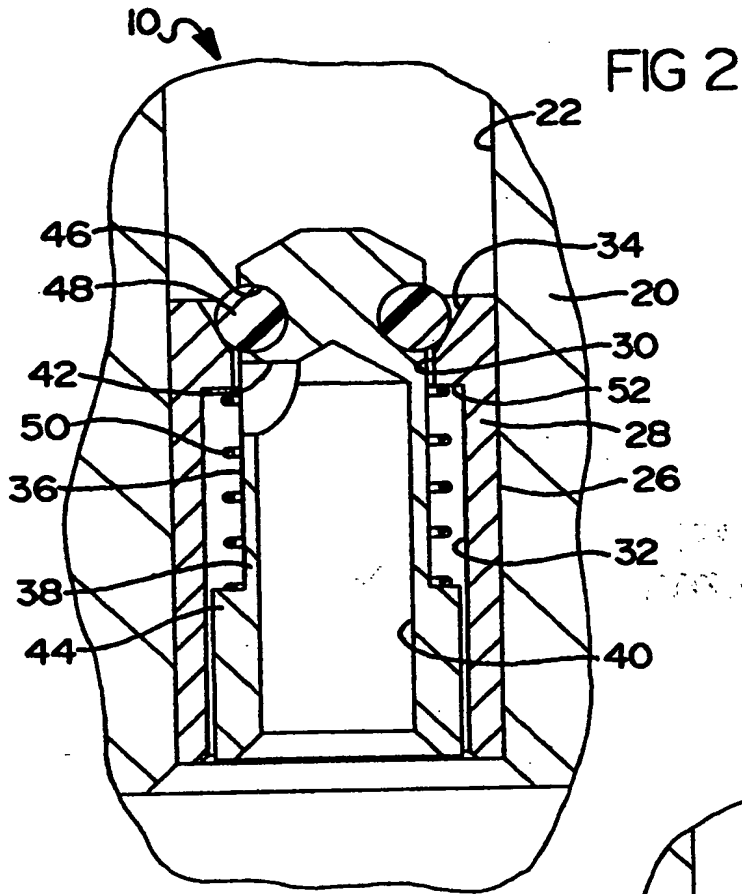
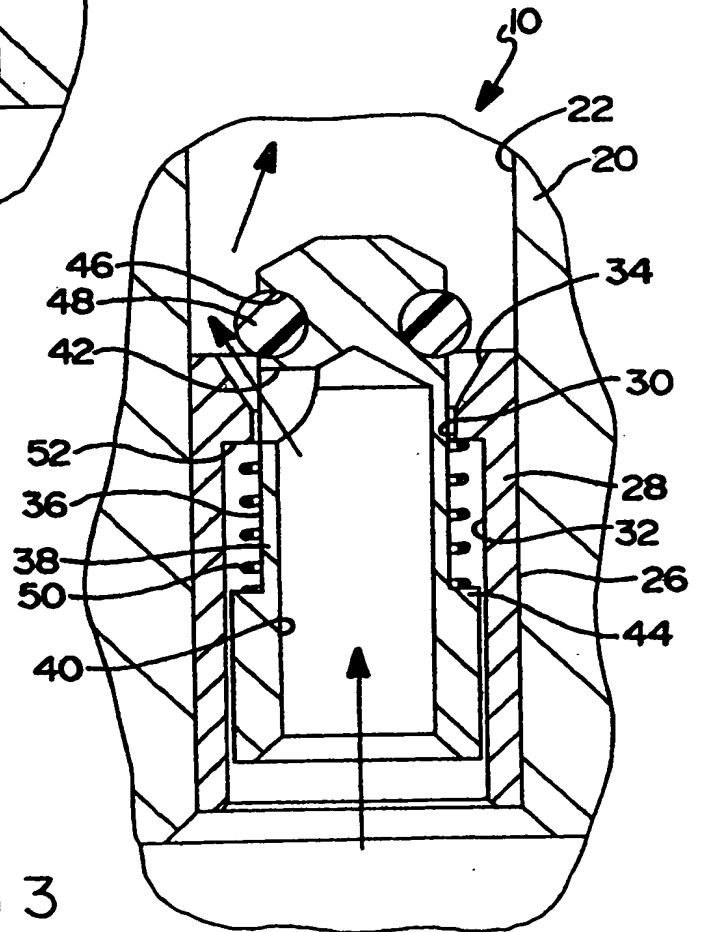


FIG 3



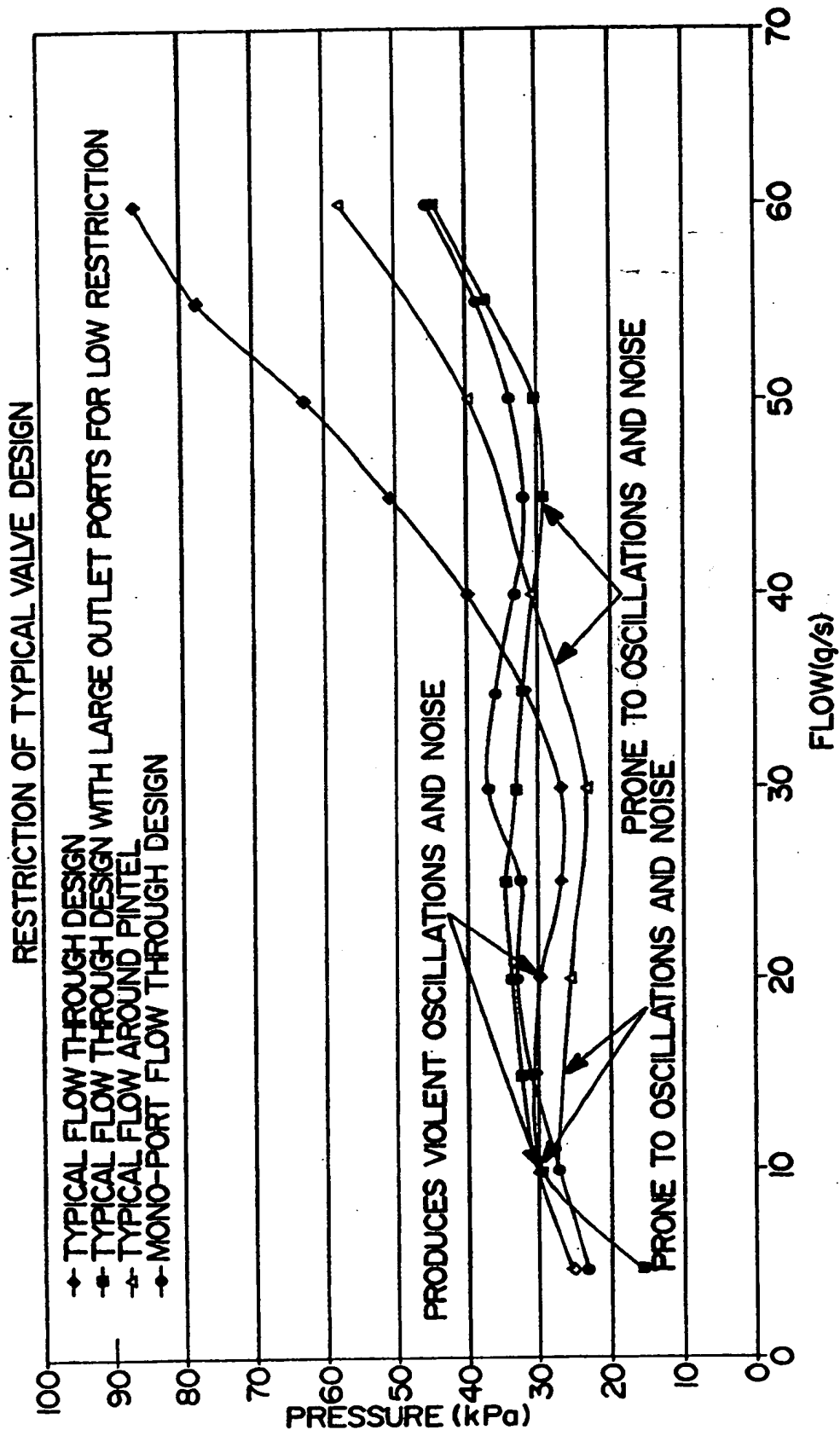
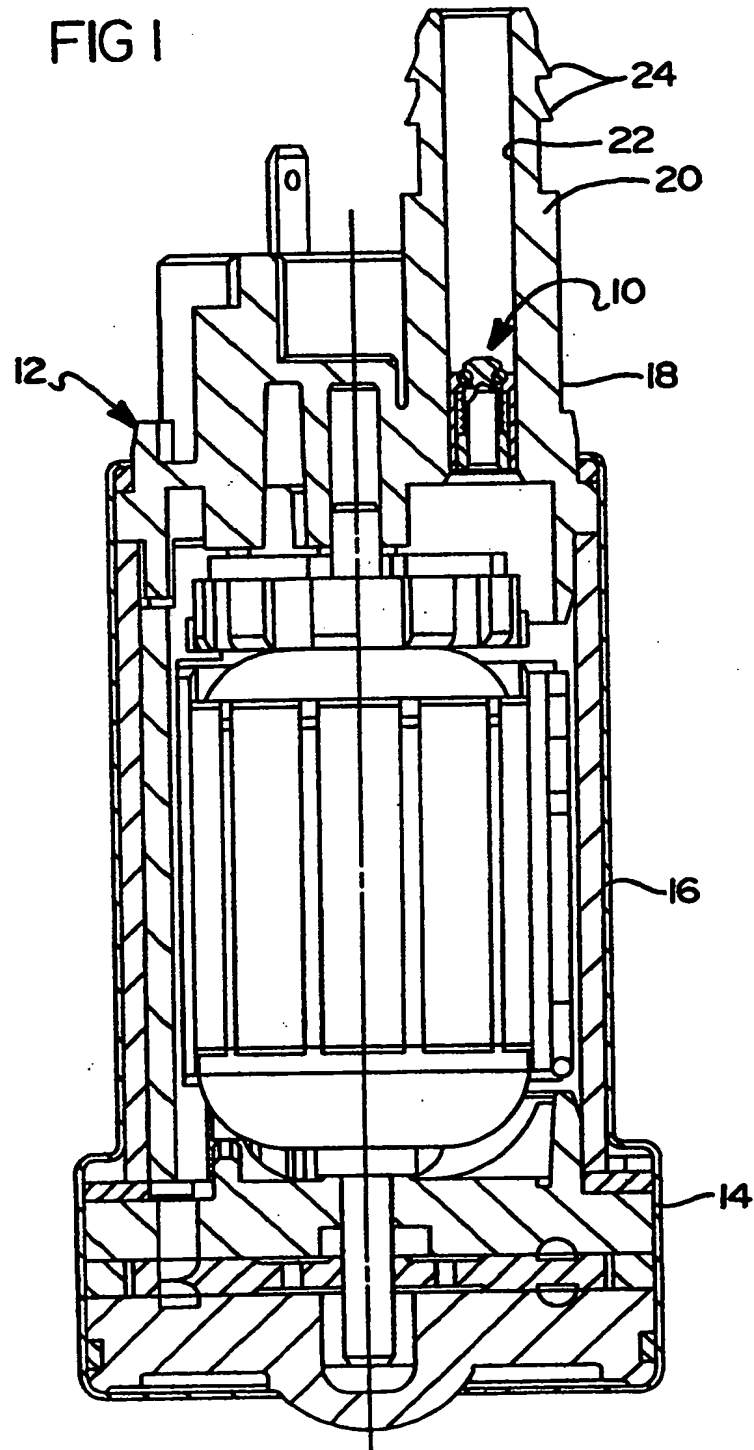


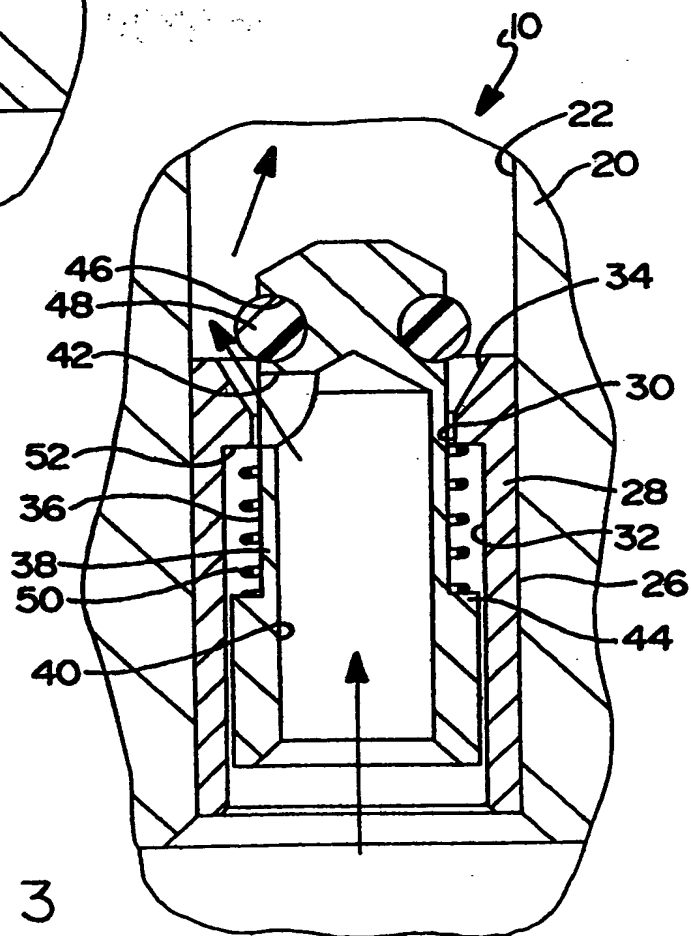
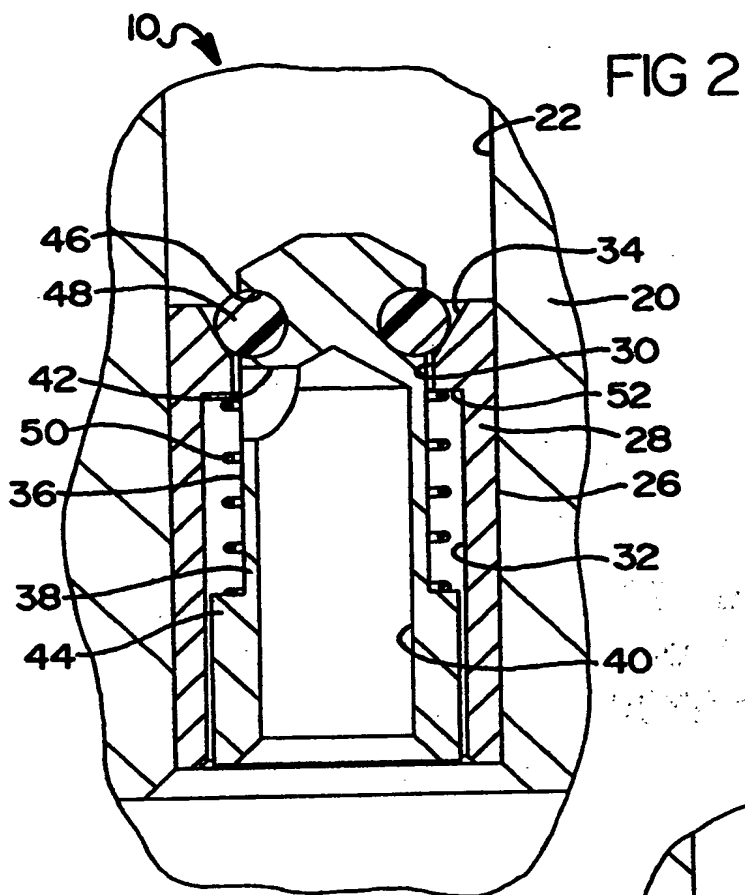
FIG 4



Docket No.: DP-306071
Inventor(s): Robert A. Roth
For: CHECK VALVE FOR FUEL PUMP
Serial No.: 09/992,079 - Filed: November 19, 2001
1/3

FIG 1





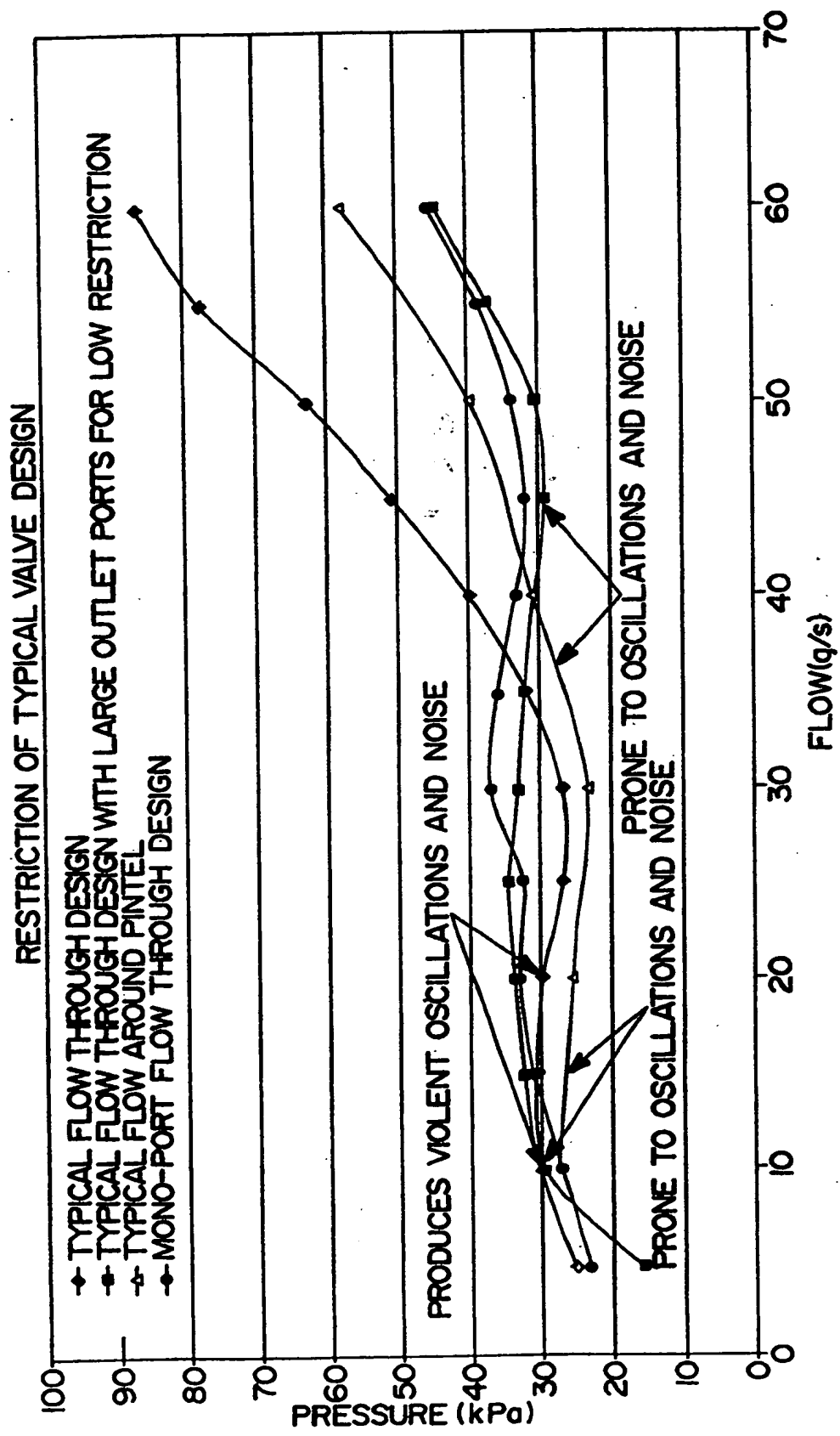


FIG 4